

Application No.: 09/283,596
Filed: April 10, 1999

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5 a tissue mount for positioning the at least partially fixed sheet of biological tissue within the container between the input and output and restrain its gross movement therein, the tissue mount being adapted to mount the tissue sheet in a planar configuration substantially parallel to the direction of flow of the treatment fluid, the sheet of biological tissue being immersed in the continuous flow of treatment fluid; and means for heating the treatment fluid.

10 Please cancel claim 40 without prejudice.

REMARKS

Claims 1-25 and 28-42 were pending prior to the present Office Action. With this amendment, claims 7, 17, and 40 are canceled, therefore claims 1-6, 8-16, 18-25, 28-39, and 41-42 are presently pending.

15 Claims 10, 11, 13-16, 20, 21, and 23 stand rejected under 35 USC §102(b) in view of Fisher. In response, Applicants have amended claims 10 and 13. Allowable claim 17 has now been combined with claim 13 and canceled, and therefore claims 13-16 and 18-24 are believed allowable.

20 Claim 10 has been amended to incorporate what is believed patentable subject matter based on the disposition of allowable claim 13 (as amended). That is, claim 13 now specifies that the apparatus for treating tissue further includes means for restraining the immersed tissue from gross movement within the container. Claim 10 thus differs from allowable claim 13 in that the means for causing treatment fluid movement within the container is a shaker, and not a stirrer. As Fisher does not disclose a shaker, let alone a means for restraining the immersed tissue, claims 10-12 are also believed allowable thereover.

25 Claims 10, 11 and 12 stand rejected under 35 USC §102(b) in view of Freedman. In response, Applicants have amended claim 10 as indicated above. Freedman does not disclose a means for restraining the immersed tissue from gross movement within the container, and thus claims 10-12 are believed allowable.

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Claims 1, 4, 7, 8, 25, 30, 31, and 40 stand rejected under 35 USC §102(e) in view of Park, et al. Park, et al. disclose both static and dynamic tissue culturing systems, with the static system shown in Figs. 4-5. The system includes a mesh on which tissue to be cultured is "placed" in an incubation chamber. The tissue is then contacted alternately with a fluid culture medium and an oxygen-containing gas, with the former being periodically delivered by a peristaltic pump from above the mesh. The fluid medium "runs down" the space between the mesh and the chamber wall in which the tissue is positioned.

Claim 1 has been amended to specify that the apparatus includes a reservoir for the fixative treatment fluid and a heater for heating fluid in the reservoir. Although Park, et al. disclose a reservoir, there is no disclosure or suggestion of heating the fluid within the reservoir. Instead, the only disclosure of heating provides that the *incubation chamber* is maintained at a constant temperature (either 37°C or 38°C) (emphasis added). In addition, the system of Park, et al. is not intended to fix tissue, but instead exposes the tissue to a culture medium. This claim is believed allowable based on the interview of November 15. Therefore, claims 1-6 and 8-9 are believed allowable.

Claim 25 has been amended to specify that the apparatus includes a system for continuously flowing fixative treatment fluid through the container and that the tissue mount positions the immersed sheet of biological tissue in a planar configuration substantially parallel to the direction of flow of the treatment fluid. There is no disclosure or suggestion of providing continuous flow or immersing the tissue in a continuous flow stream. Indeed, Park, et al. teach against continuous fluid flow to ensure sufficient oxygen is supplied to the tissue (see, e.g., column 1, third full paragraph). Further, although Park, et al. disclose spacing pieces of tissue in series parallel to the direction that the fluid travels (down, by gravity), there is no disclosure of providing a tissue mount adapted to immerse a tissue sheet in a planar configuration substantially parallel to the direction of continuous flow of the treatment fluid. And again, the system of Park, et al. is not intended to fix tissue, but instead exposes the tissue to a culture medium. This claim is believed allowable based on the interview of November 15. Therefore, claims 25 and 28-31 are believed allowable.

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In summary, claims 1-6, 8-16, 18-25, 28-39, and 41-42 are believed allowable over the prior art of record. If there is any further hindrance to allowance, the Examiner is encouraged to contact the undersigned by telephone.

Respectfully submitted,

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Date: _____

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